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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

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JAN 11 2002

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of)
)
Amendment of Section 73.622(b))
Table of Allotments,)
Digital Television Broadcast Stations)
(Cadillac and Manistee, Michigan))
)

MM Docket No. _____
RM- _____

To: Chief, Allocations Branch
Policy and Rules Division
Mass Media Bureau

**PETITION FOR RULE MAKING
TO AMEND THE DTV TABLE OF ALLOTMENTS**

Central Michigan University ("CMU"), the licensee of reserved television Stations WCMV, Cadillac, Michigan and WCMW, Manistee, Michigan, by its attorneys and pursuant to Sections 1.401 and 73.622(a) of the Commission's Rules, respectfully petitions the Commission to institute a rulemaking to "swap" the DTV allocations for its commonly-owned Stations WCMV-DT and WCMW-DT. CMU seeks to amend Section 73.622(b), the DTV Table of Allotments, by substituting Channel *17 for Channel *58 as WCMV-DT's paired DTV allocation and by substituting Channel *58 for Channel *17 as WCMW-DT's paired DTV allocation.

Pursuant to this proposal, the DTV Table of Allotments would be amended as follows:

No. of Copies rec'd 014
List A B C D E MMB
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	<u>Present</u>	<u>Proposed</u>
Cadillac, MI	40, 47, <u>*58</u>	<u>*17</u> , 40, 47
Manistee, MI	<u>*17</u>	<u>*58</u>

This DTV allocation “swap” would serve the public interest and preserve the scarce resources of CMU. In addition, as the attached Engineering Statement demonstrates, the proposed DTV allocation “swap” will not cause impermissible interference to any other stations.

Background

CMU is the licensee of four (4) noncommercial educational television stations. CMU is a long-time licensee of public broadcasting stations, commencing operation of its first public TV station in 1967. It continues to provide high quality educational, informational and cultural programming, including children’s programming, to the central and northern Michigan region (consisting of 52 counties). By necessity, as a noncommercial educational licensee and a public institution of higher education, CMU must be a careful steward of its resources, even while it seeks to initiate DTV service to its communities. Moreover, CMU’s DTV transition faces enormous obstacles because the Commission allotted out-of-core channels (Channels *56, *57 and *58) as the paired DTV channels for three (3) of CMU’s four (4) public television stations – this alone places an enormous burden on CMU during DTV conversion.¹

¹ The Commission allocated Channels 56, 57, and 58 as CMU’s paired DTV channels for WCMU-TV, Mt. Pleasant, WCML, Alpena and WCMV, Cadillac. Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service, *Sixth Report and Order*, MM Docket 87-268, 12 FCC Red 14588, ¶172 (1997).

For example, operation of DTV stations on Channels *56, *57 and *58 with the power levels specified by the Commission to replicate coverage would result in additional electrical power costs of about \$933,000 per year. This is in itself a devastating expense for a non-commercial educational licensee like CMU. Moreover, activating three of its DTV channels on Channels *56, *57 and *58 would require CMU to change channels for each of these stations after the transition period. Thus, CMU would be required to activate its three DTV stations, only to move them to other channels after the transition period, resulting in duplicative DTV build out expenses.

As explained below, CMU determined that a “swap” of DTV channels for WCMW in Manistee and WMCV in Cadillac would relieve some of this burden and therefore best serve its DTV plans as well as the public interest.²

This DTV Swap is Consistent with DTV Rules and Policies

Amending the DTV Table of Allotments as requested herein consistent with the Commission’s rules and policies designed to facilitate the implementation of digital television. Recognizing the intricacies of DTV allocations and the need for stations to maximize service efficiently, the Commission promised to provide broadcasters with flexibility in developing alternate allotment proposals.³ For example, the Commission has encouraged efficient use of the spectrum by stating:

[S]ome licensees may find it beneficial to develop partnerships with others to help make the most productive and efficient use of their channels, and we will look with favor on such arrangements.... Such arrangements will aid both broadcaster and

² CMU has also sought to substitute an in-core channel for Station WCML in lieu of Channel *57.

³ Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service, *Sixth Report and Order*, MM Docket 87-268, 12 FCC Rcd 14588, ¶172 (1997).

public, by helping the broadcaster achieve the most competitive and beneficial business strategy and by ensuring for the public the best use of the digital spectrum, including not only the most efficient use of the spectrum but also the greatest array of valuable services.⁴

In this case, CMU is the licensee of both television stations and seeks in effect to partner with itself in order to re-work its own DTV allocations in a way that will maximize service in a cost-effective, fiscally prudent manner. In addition, the Commission explicitly stated that noncommercial stations would be afforded "special treatment" in the transition to digital television, in recognition of the exceptional difficulties noncommercial stations would face in the digital conversion.⁵ The instant plan proposed by CMU achieves certain efficiencies and public interest benefits, as the Commission encouraged, and enhances the proposed DTV service of two noncommercial stations. Accordingly, this digital channel swap serves the public interest.

Considering these aspects and, as described more fully below, the mutually contingent nature of the proposed channel changes, CMU asks that the Commission issue a single *Notice of Proposed Rule Making* to address both channel changes and treat the requested amendments jointly. Such coupled treatment additionally would serve the public interest by conserving administrative resources.

As set forth in greater detail in the attached Engineering Statement (Appendix A), the DTV channel change would allow use of DTV Channel *17 -- a core channel -- to serve the larger Traverse City/Manistee DMA, while using DTV Channel *58 -- a non-core channel which is far costlier to operate, given the power costs necessary to generate replication signals and the eventual need to re-construct the station on a core channel -- for the significantly smaller

⁴ Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service, *Fifth Report and Order*, MM Docket 87-268, 12 FCC Rcd 12809, ¶60 (1997).

Manistee area. The Traverse City/Cadillac DMA is # 119 with a population count of approximately 222,960. The Manistee area is also considered to be part of the Traverse City/Cadillac market, but the population served by Station WCMW amounts to approximately 43,786 persons. Thus, use of the non-core channel (Channel *58) for the smaller population center makes better sense, as that facility, operating at considerably less power, can be modified to a core channel at a later date during DTV transition for a significantly lower cost.

Moreover, use of DTV Channel 17 at Cadillac will permit a joint DTV operation between CMU and a local commercial broadcast to share a tower, antenna and combiner. CMU's capital construction cost savings from this shared operation alone would amount to \$1,310,000. The actual cost savings is even greater when the tower rent reduction and the avoidance of a non-core channel conversion are factored in. Accordingly, the public interest would be served through more cost-effective public TV service and more efficient use of the broadcast spectrum.

As demonstrated in the Engineering Statement, the proposed service areas for both stations encompasses the community of license as required,⁶ and the proposed allotment parameters conform to the Commission's *de minimis* interference standard.⁷ No Class A impact is predicted.

⁵ *Id.* at ¶104.

⁶ 47 C.F.R. §73.623(c)(1).

⁷ 47 C.F.R. §73.623(c)(2).

For the reasons set forth above, CMU respectfully requests that the Commission initiate a rulemaking proceeding to amend Section 73.622(b) of its Rules and substitute Channel *17 for Channel *58 as the channel assigned to WCMV-DT in Cadillac, Michigan and to substitute Channel *58 for Channel *17 as the channel assigned to WCMW-DT in Manistee, Michigan.

Respectfully submitted,

CENTRAL MICHIGAN UNIVERSITY

By: 

Todd D. Gray
Margaret L. Miller
Its Counsel

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202-776-2000

January 11, 2002

APPENDIX A

Engineering Statement



ENGINEERING STATEMENT

OF

JOHN F.X. BROWNE, P.E.

IN SUPPORT OF

PETITION FOR RULE MAKING
DTV TABLE OF ALLOTMENTS

CADILLAC, MI

MANISTEE, MI

Central Michigan University (CMU) is the licensee of non-commercial television broadcast stations WCMV-TV at Cadillac, MI, and WCMW-TV at Manistee, MI. CMU also operates two other television stations at Mt. Pleasant, MI, WCMU-TV and Alpena, MI, WCML-TV. The Cadillac station serves the Traverse City – Cadillac DMA.

In its Sixth Report and Order in the Advanced Television (DTV) Proceeding, the Commission made the following DTV allotments:

WCMV-DT	Cadillac	Channel *58
WCMW-DT	Manistee	Channel *17

CMU has received FCC construction permits for both facilities specifying maximum ERP levels of 200 kW at Cadillac and 50 kW at Manistee. CMU is concerned about building a maximized facility on Channel 58 to serve the larger of the two markets as this "out-of-core" channel would eventually require the expensive modification / reconstruction of the facility on an in-core channel. If the channel allotments for these geographically-adjacent facilities were "swapped", CMU could build-out the Channel 17 DTV facility to cover the larger Traverse City – Cadillac DMA while the Channel 58 facility could initially serve the significantly smaller Manistee area and could be later modified at a significantly lower cost.

Interference Studies

Engineering studies were undertaken to determine whether the channel exchange could be effected while meeting all de minimis interference requirements. It also became apparent that a better siting for Channel 17 would be the tower site of WGTU-TV, a full-service commercial station serving Traverse City and northern (lower) Michigan. CMU has made arrangements with WGTU to co-locate its DTV facilities. A maximization study indicates that Channel 17 could be operated with 500 kW and meet all domestic de minimis interference requirements.

However, further study reveals that the power towards the East would have to be limited to 125 kW in order to provide adequate protection to a station in Warton, Ontario, under the provisions of the US-Canada DTV LOU. Therefore, it is proposed to specify a directional antenna pattern as part of this allotment. The Appendix to this statement contains the details on that antenna pattern.

Similar studies were conducted for the proposed transposition of Channel 58 to Manistee, MI. These studies indicate that a directional antenna would be required in order to protect a station in Milwaukee, WI, on Channel 58 (WDJT-TV). Therefore, a cardioid pattern is specified in accordance with the details set forth in the Appendix. (It is also noted that such a pattern would probably be specified in any event as the western half of the coverage of this station would be over Lake Michigan if an omnidirectional pattern is employed.)

Conclusion

Therefore, it is requested that the Section 73.622(b) be amended as follows:

	<u>Present</u>	<u>Proposed</u>
Michigan		
Cadillac	40, 47, * 58	* 17 , 40, 47
Manistee	* 17	* 58

The proposed changes can be made with the following specified parameters:

Channel 58 – Manistee

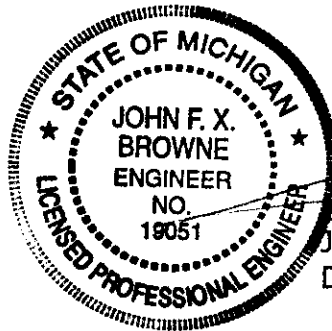
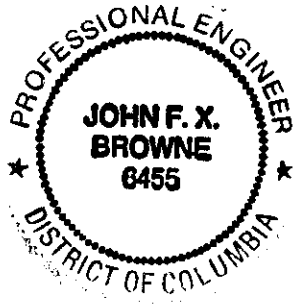
Max ERP	200 kW, DA
HAAT	104 m
Site	44-03-57 N
	86-19-58 W

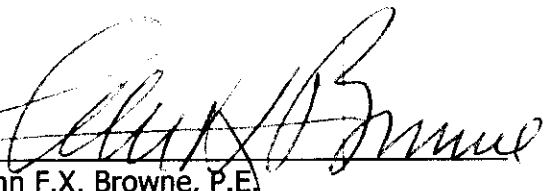
Channel 17 – Cadillac

Max ERP	500 kW, DA
HAAT	399 m
Site	44-44-53 N 85-04-08 W

Certification

This statement with associated exhibits was prepared by me or under my direction. All assertions contained in the statement are true of my own personal knowledge except where otherwise indicated and these latter assertions are based on information from sources known to be reliable and are believed to be true.




John F.X. Browne, P.E.
December 12, 2001

Attachment: Appendix



APPENDIX

Figure 1 Directional Antenna Pattern / Data
Cadillac Channel 17

Figure 2 Directional Antenna Pattern / Data
Manistee Channel 58

Figure 3 Canadian DTV Study

Dielectric

Date

07 Dec 2001

Call Letters

Channel 17

Location

Customer

Antenna Type

TUA-C4-06/24U-T

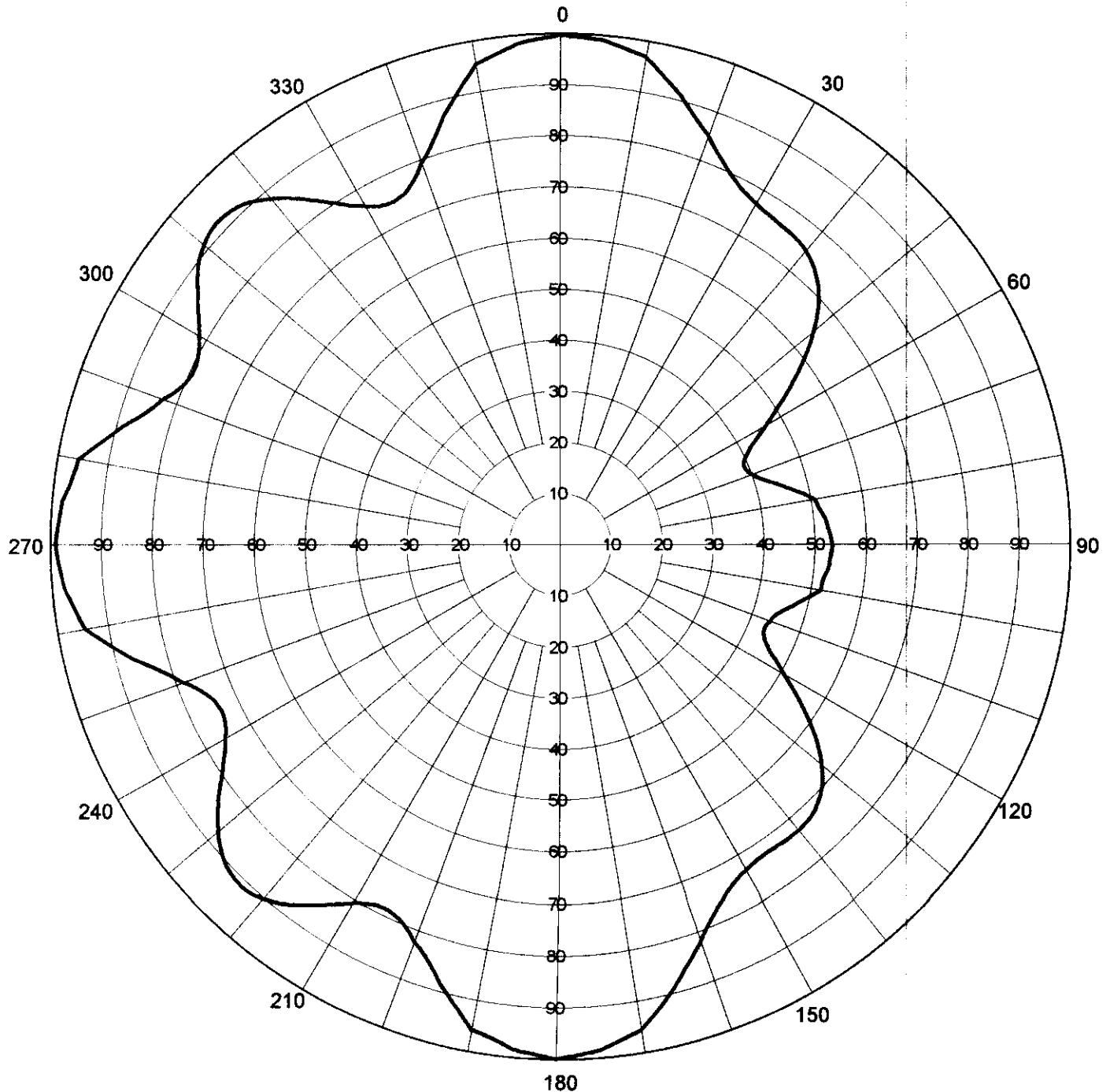
AZIMUTH PATTERN

RMS Gain at Main Lobe
Calculated / Measured

1.60 (2.04 dB)
Calculated

Frequency
Drawing #

491 MHz
TUA-C4



Remarks:

Date **07 Dec 2001**
Call Letters
Location
Customer
Antenna Type **TUA-C4-06/24U-T**

Channel **17**

TABULATION OF AZIMUTH PATTERN

Azimuth Pattern Drawing # **TUA-C4**

Angle	Field	ERP (kW)	ERP (dBk)
0	0.996	496.0	26.95
10	0.969	469.5	26.72
20	0.851	362.1	25.59
30	0.771	297.2	24.73
40	0.751	282.0	24.50
50	0.651	211.9	23.26
60	0.468	109.5	20.39
70	0.402	80.8	19.07
80	0.508	129.0	21.11
90	0.536	143.6	21.57
100	0.520	135.2	21.31
110	0.439	96.4	19.84
120	0.509	129.5	21.12
130	0.672	225.8	23.54
140	0.730	266.5	24.26
150	0.734	269.4	24.30
160	0.820	336.2	25.27
170	0.957	457.9	26.61
180	1.000	500.0	26.99
190	0.959	459.8	26.63
200	0.822	337.8	25.29
210	0.808	326.4	25.14
220	0.902	406.8	26.09
230	0.873	381.1	25.81
240	0.756	285.8	24.56
250	0.786	308.9	24.90
260	0.945	446.5	26.50
270	0.989	489.1	26.89
280	0.958	458.9	26.62
290	0.828	342.8	25.35
300	0.815	332.1	25.21
310	0.910	414.1	26.17
320	0.881	388.1	25.89
330	0.764	291.8	24.65
340	0.793	314.4	24.98
350	0.953	454.1	26.57

Maxima

Angle	Field	ERP (kW)	ERP (dBk)
0	0.996	496.0	26.95
90	0.536	143.6	21.57
141	0.730	266.5	24.26
180	1.000	500.0	26.99
223	0.913	416.8	26.20
270	0.989	489.1	26.89
313	0.921	424.1	26.27

Minima

Angle	Field	ERP (kW)	ERP (dBk)
68	0.393	77.2	18.88
112	0.434	94.2	19.74
146	0.727	264.3	24.22
206	0.786	308.9	24.90
244	0.737	271.6	24.34
296	0.793	314.4	24.98
334	0.745	277.5	24.43

Remarks:

Date 04 Dec 2001
 Call Letters
 Location
 Customer
 Antenna Type TFU-24DSC-R C170

Channel 58

TABULATION OF AZIMUTH PATTERN

Azimuth Pattern Drawing # TFU-C170

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
0	0.940	45	0.949	90	0.899	135	0.949	180	0.940	225	0.365	270	0.245	315	0.365
1	0.946	46	0.946	91	0.899	136	0.952	181	0.933	226	0.352	271	0.244	316	0.379
2	0.952	47	0.944	92	0.899	137	0.954	182	0.925	227	0.338	272	0.244	317	0.393
3	0.958	48	0.941	93	0.899	138	0.957	183	0.918	228	0.326	273	0.243	318	0.407
4	0.963	49	0.939	94	0.899	139	0.960	184	0.910	229	0.313	274	0.242	319	0.422
5	0.968	50	0.936	95	0.900	140	0.963	185	0.901	230	0.302	275	0.241	320	0.437
6	0.973	51	0.934	96	0.900	141	0.965	186	0.893	231	0.290	276	0.240	321	0.451
7	0.977	52	0.932	97	0.900	142	0.968	187	0.883	232	0.280	277	0.238	322	0.466
8	0.981	53	0.930	98	0.900	143	0.971	188	0.874	233	0.269	278	0.236	323	0.482
9	0.984	54	0.928	99	0.900	144	0.973	189	0.864	234	0.260	279	0.234	324	0.497
10	0.987	55	0.926	100	0.900	145	0.976	190	0.854	235	0.251	280	0.232	325	0.512
11	0.990	56	0.924	101	0.901	146	0.978	191	0.843	236	0.243	281	0.229	326	0.527
12	0.992	57	0.922	102	0.901	147	0.981	192	0.832	237	0.235	282	0.227	327	0.543
13	0.994	58	0.920	103	0.901	148	0.983	193	0.821	238	0.229	283	0.224	328	0.558
14	0.996	59	0.918	104	0.902	149	0.986	194	0.809	239	0.223	284	0.222	329	0.573
15	0.997	60	0.917	105	0.902	150	0.988	195	0.797	240	0.218	285	0.219	330	0.588
16	0.998	61	0.915	106	0.903	151	0.990	196	0.785	241	0.214	286	0.216	331	0.604
17	0.999	62	0.914	107	0.903	152	0.992	197	0.773	242	0.210	287	0.214	332	0.619
18	1.000	63	0.912	108	0.904	153	0.993	198	0.760	243	0.207	288	0.211	333	0.634
19	1.000	64	0.911	109	0.905	154	0.995	199	0.747	244	0.206	289	0.209	334	0.648
20	1.000	65	0.910	110	0.905	155	0.996	200	0.733	245	0.204	290	0.207	335	0.663
21	1.000	66	0.909	111	0.906	156	0.997	201	0.720	246	0.204	291	0.206	336	0.677
22	0.999	67	0.908	112	0.907	157	0.998	202	0.706	247	0.204	292	0.205	337	0.692
23	0.998	68	0.907	113	0.908	158	0.999	203	0.692	248	0.205	293	0.204	338	0.706
24	0.997	69	0.906	114	0.909	159	1.000	204	0.677	249	0.206	294	0.204	339	0.720
25	0.996	70	0.905	115	0.910	160	1.000	205	0.663	250	0.207	295	0.204	340	0.733
26	0.995	71	0.905	116	0.911	161	1.000	206	0.648	251	0.209	296	0.206	341	0.747
27	0.993	72	0.904	117	0.912	162	1.000	207	0.634	252	0.211	297	0.207	342	0.760
28	0.992	73	0.903	118	0.914	163	0.999	208	0.619	253	0.214	298	0.210	343	0.773
29	0.990	74	0.903	119	0.915	164	0.998	209	0.604	254	0.216	299	0.214	344	0.785
30	0.988	75	0.902	120	0.917	165	0.997	210	0.588	255	0.219	300	0.218	345	0.797
31	0.986	76	0.902	121	0.918	166	0.996	211	0.573	256	0.222	301	0.223	346	0.809
32	0.983	77	0.901	122	0.920	167	0.994	212	0.558	257	0.224	302	0.229	347	0.821
33	0.981	78	0.901	123	0.922	168	0.992	213	0.543	258	0.227	303	0.235	348	0.832
34	0.978	79	0.901	124	0.924	169	0.990	214	0.527	259	0.229	304	0.243	349	0.843
35	0.976	80	0.900	125	0.926	170	0.987	215	0.512	260	0.232	305	0.251	350	0.854
36	0.973	81	0.900	126	0.928	171	0.984	216	0.497	261	0.234	306	0.260	351	0.864
37	0.971	82	0.900	127	0.930	172	0.981	217	0.482	262	0.236	307	0.269	352	0.874
38	0.968	83	0.900	128	0.932	173	0.977	218	0.466	263	0.238	308	0.280	353	0.883
39	0.965	84	0.900	129	0.934	174	0.973	219	0.451	264	0.240	309	0.290	354	0.893
40	0.963	85	0.900	130	0.936	175	0.968	220	0.437	265	0.241	310	0.302	355	0.901
41	0.960	86	0.899	131	0.939	176	0.963	221	0.422	266	0.242	311	0.313	356	0.910
42	0.957	87	0.899	132	0.941	177	0.958	222	0.407	267	0.243	312	0.326	357	0.918
43	0.954	88	0.899	133	0.944	178	0.952	223	0.393	268	0.244	313	0.338	358	0.925
44	0.952	89	0.899	134	0.946	179	0.946	224	0.379	269	0.244	314	0.352	359	0.933

Remarks:

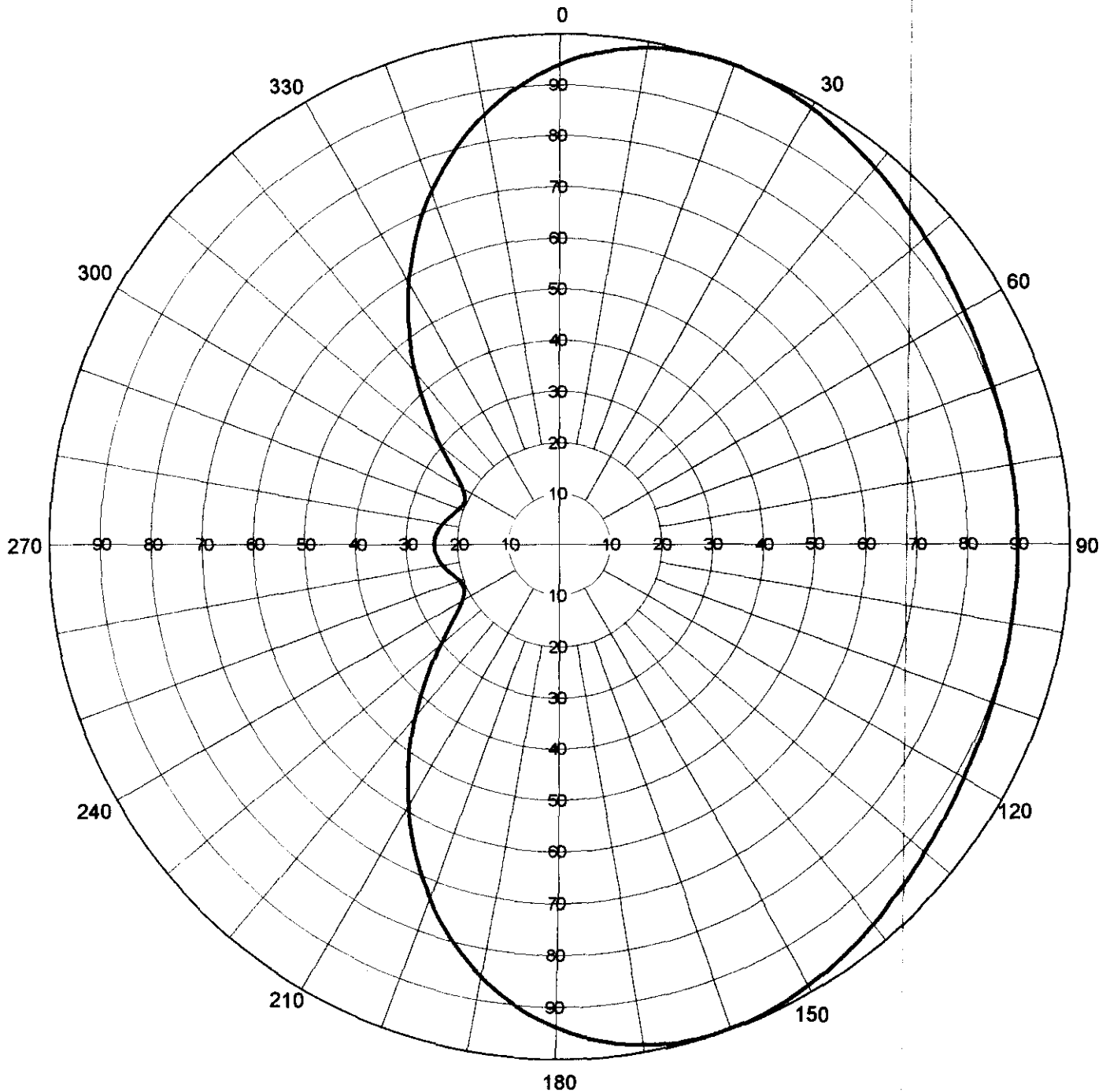
Date 12 Dec 2001
 Call Letters
 Location
 Customer
 Antenna Type TFU-24DSC-R C170
 Channel 58

AZIMUTH PATTERN

RMS Gain at Main Lobe
 Calculated / Measured

1.70 (2.30 dB)
 Calculated

Frequency 737 MHz
 Drawing # TFU-C170



Remarks:

TABULATION OF AZIMUTH PATTERN

Azimuth Pattern Drawing # TFU-C170

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
0	0.940	45	0.949	90	0.899	135	0.949	180	0.940	225	0.365	270	0.245	315	0.365
1	0.946	46	0.946	91	0.899	136	0.952	181	0.933	226	0.352	271	0.244	316	0.379
2	0.952	47	0.944	92	0.899	137	0.954	182	0.925	227	0.338	272	0.244	317	0.393
3	0.958	48	0.941	93	0.899	138	0.957	183	0.918	228	0.326	273	0.243	318	0.407
4	0.963	49	0.939	94	0.899	139	0.960	184	0.910	229	0.313	274	0.242	319	0.422
5	0.968	50	0.936	95	0.900	140	0.963	185	0.901	230	0.302	275	0.241	320	0.437
6	0.973	51	0.934	96	0.900	141	0.965	186	0.893	231	0.290	276	0.240	321	0.451
7	0.977	52	0.932	97	0.900	142	0.968	187	0.883	232	0.280	277	0.238	322	0.466
8	0.981	53	0.930	98	0.900	143	0.971	188	0.874	233	0.269	278	0.236	323	0.482
9	0.984	54	0.928	99	0.900	144	0.973	189	0.864	234	0.260	279	0.234	324	0.497
10	0.987	55	0.926	100	0.900	145	0.976	190	0.854	235	0.251	280	0.232	325	0.512
11	0.990	56	0.924	101	0.901	146	0.978	191	0.843	236	0.243	281	0.229	326	0.527
12	0.992	57	0.922	102	0.901	147	0.981	192	0.832	237	0.235	282	0.227	327	0.543
13	0.994	58	0.920	103	0.901	148	0.983	193	0.821	238	0.229	283	0.224	328	0.558
14	0.996	59	0.918	104	0.902	149	0.986	194	0.809	239	0.223	284	0.222	329	0.573
15	0.997	60	0.917	105	0.902	150	0.988	195	0.797	240	0.218	285	0.219	330	0.588
16	0.998	61	0.915	106	0.903	151	0.990	196	0.785	241	0.214	286	0.216	331	0.604
17	0.999	62	0.914	107	0.903	152	0.992	197	0.773	242	0.210	287	0.214	332	0.619
18	1.000	63	0.912	108	0.904	153	0.993	198	0.760	243	0.207	288	0.211	333	0.634
19	1.000	64	0.911	109	0.905	154	0.995	199	0.747	244	0.206	289	0.209	334	0.648
20	1.000	65	0.910	110	0.905	155	0.996	200	0.733	245	0.204	290	0.207	335	0.663
21	1.000	66	0.909	111	0.906	156	0.997	201	0.720	246	0.204	291	0.206	336	0.677
22	0.999	67	0.908	112	0.907	157	0.998	202	0.706	247	0.204	292	0.205	337	0.692
23	0.998	68	0.907	113	0.908	158	0.999	203	0.692	248	0.205	293	0.204	338	0.706
24	0.997	69	0.906	114	0.909	159	1.000	204	0.677	249	0.206	294	0.204	339	0.720
25	0.996	70	0.905	115	0.910	160	1.000	205	0.663	250	0.207	295	0.204	340	0.733
26	0.995	71	0.905	116	0.911	161	1.000	206	0.648	251	0.209	296	0.206	341	0.747
27	0.993	72	0.904	117	0.912	162	1.000	207	0.634	252	0.211	297	0.207	342	0.760
28	0.992	73	0.903	118	0.914	163	0.999	208	0.619	253	0.214	298	0.210	343	0.773
29	0.990	74	0.903	119	0.915	164	0.998	209	0.604	254	0.216	299	0.214	344	0.785
30	0.988	75	0.902	120	0.917	165	0.997	210	0.588	255	0.219	300	0.218	345	0.797
31	0.986	76	0.902	121	0.918	166	0.996	211	0.573	256	0.222	301	0.223	346	0.809
32	0.983	77	0.901	122	0.920	167	0.994	212	0.558	257	0.224	302	0.229	347	0.821
33	0.981	78	0.901	123	0.922	168	0.992	213	0.543	258	0.227	303	0.235	348	0.832
34	0.978	79	0.901	124	0.924	169	0.990	214	0.527	259	0.229	304	0.243	349	0.843
35	0.976	80	0.900	125	0.926	170	0.987	215	0.512	260	0.232	305	0.251	350	0.854
36	0.973	81	0.900	126	0.928	171	0.984	216	0.497	261	0.234	306	0.260	351	0.864
37	0.971	82	0.900	127	0.930	172	0.981	217	0.482	262	0.236	307	0.269	352	0.874
38	0.968	83	0.900	128	0.932	173	0.977	218	0.466	263	0.238	308	0.280	353	0.883
39	0.965	84	0.900	129	0.934	174	0.973	219	0.451	264	0.240	309	0.290	354	0.893
40	0.963	85	0.900	130	0.936	175	0.968	220	0.437	265	0.241	310	0.302	355	0.901
41	0.960	86	0.899	131	0.939	176	0.963	221	0.422	266	0.242	311	0.313	356	0.910
42	0.957	87	0.899	132	0.941	177	0.958	222	0.407	267	0.243	312	0.326	357	0.918
43	0.954	88	0.899	133	0.944	178	0.952	223	0.393	268	0.244	313	0.338	358	0.925
44	0.952	89	0.899	134	0.946	179	0.946	224	0.379	269	0.244	314	0.352	359	0.933

Remarks:

Figure 2

Page 2 of 2

Study Date: 20011206
Study Start: 11:50:50
CANADIAN CONTOUR ANALYSIS

CBLN-TV 44-44-37 080-54-16 17 75.000kw 507.2 m 39.0dbu 70.0 km
WIARTON, ON
CANTAB CLASS C

WCMWD2 44-44-53 085-04-08 17 500.000kw 727 m 10%
MANISTEE, MI
CP BPEDT20000403A CLASS VL

Using 10/10
IX Threshold: 19.50000
Interference found
Number of points = 284.0000
Min bearing: 76.3 Min distance: 259.6
Max bearing: 76.5 Max distance: 335.3
Worst IX dif: 19.4 at bearing: 82.1

Study Date: 20011206
 Study Start: 11:54:00
 CANADIAN INTERFERENCE CAUSED
 CELL SIZE : 2.00
 Using DTV->DTV service params
 Using circles for service area

CBLN-TV 44-44-37 080-54-16 17(0) 75.000 kw 507.3 m 90.0 % 39.0 dBu
 WIARTON ON
 CANTAB CLASS C
 Calculated RCAMSL with HAAT of 300
 %loc = 90.00 %time = 90.00

	Area	Pop
within Noise Limited Contour	15434.77	137447
not affected by terrain losses	15090.35	128722

WCMWD2 44-44-53 085-04-08 17(N) 500.000 kw 727 m 10.0 % 39.0 dBu
 MANISTEE MI 4535 47 DTVSERVICE: 47000 NTSCSERVICE: 46000
 CP BPEDT20000403AAR CLASS VL

D/U Baseline: 19.50
 %loc = 10.00%time = 10

	Area	Pop
Interference	825.00	9739(7.1)

Study end time: 11:54:57

Facility	Channel	Type	Baseline	Permissible	IX	%Base
CBLN-TV, WIARTON, ON	17	DTV	0	2.0	9739	0.00